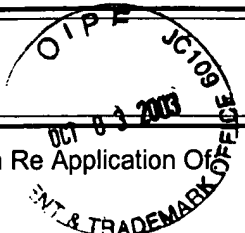


2853

	TRANSMITTAL LETTER (General - Patent Pending)	Docket No. 03280057AA
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In Re Application Of T. Yamada et al.

Serial No. 09/805,216	Filing Date 3/14/01	Examiner L.S. Nguyen	Group Art Unit 2853
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Title: Line Scanning Ink Jet Recoding Device Capable of Finely and Individually Controlling Ink Ejection From Each Nozzel

TO THE COMMISSIONER FOR PATENTS:

Transmitted herewith is:

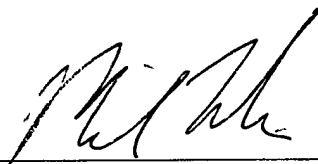
Submission of Missing Page of Verified English Language Translation and Submission of Comparative Table Postcard

in the above identified application.

- ☒ No additional fee is required.
- ☐ A check in the amount of _____ is attached.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. _____ as described below.
- ☐ Charge the amount of _____
- ☐ Credit any overpayment.
- ☒ Charge any additional fee required.

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Signature

Dated: Oct. 3, 2003

Michael E. Whitham
Reg. No. 32,635
Whitham, Curtis & Christofferson, PC
11491 Sunset Hills Road - #340
Reston, VA 20190
703/787-9400

I certify that this document and fee is being deposited on _____ with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Signature of Person Mailing Correspondence

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SDavis
11/25/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Shinya Kobayashi

Serial No.: 09/805,216

Group Art Unit: 2853

Filed: March 14, 2001

Examiner: Lam S. Nguyen

For: LINE SCANNING INK JET RECORDING DEVICE CAPABLE OF
FINELY AND INDIVIDUALLY CONTROLLING INK EJECTION FROM
EACH NOZZLE

Box Non-Fee Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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SUBMISSION OF MISSING PAGE OF VERIFIED ENGLISH LANGUAGE
TRANSLATION AND SUBMISSION OF COMPARATIVE TABLE

Sir:

A response to the office action mailed June 4, 2003, was filed in the USPTO on September 4, 2003. On September 22, 2003, a supplemental amendment and submission of verified English language translation of priority application was filed in the USPTO. This September 22, 2003 filing was discussed with the Examiner by telephone on September 30, 2003 and October 1, 2003.

Attached hereto is page 32 of the verified English language translation. This page was inadvertently missing from the translation document filed in the USPTO on September 22, 2003.

Also attached is a table showing where various features of the claimed invention can be found in the Japanese Priority Application.

In view of the submissions which have been made in this case, neither JP 2000-042396 nor U.S. Patent 6,471,352 are proper references against the claims in the present application.

The application should now be in prima facie condition for allowance.
Therefore, prompt reconsideration and allowance of the claims at an early date is requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Michael E. Whitham', written in a cursive style.

Michael E. Whitham
Reg. No. 32,635

Whitham, Curtis & Christofferson, P.C.
11491 Sunset Hills Road, Suite 340
Reston, VA 20190

703-787-9400

printing a high quality image can be provided.

[0055]

Next, other embodiment will be explained with reference to Fig. 13.

5 [0056]

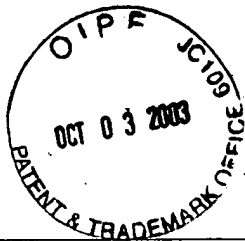
Conventionally, when a plurality of nozzles are driven, the method called multisift was used in order to reduce interference on the ejection speed V_d and the ejection amount m among the nozzles. For example, when the time width of a driving pulse is as short as $10\mu s$, whereas a dot frequency for repeatedly recording a dot is $100\mu s$, nozzles are divided into a plurality of groups and the driving pulses corresponding to the nozzles in the same group are controlled not to be output in synchronization. It is proved that the interference is suppressed by this. In this invention, it is difficult to perform the multishift, because a generation timing of a driving pulse differs among the nozzles as a result of the correction of the impingement position (the second stage). Therefore, the interference may cause an undesirably large effect.

10
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[0057]

In order to overcome these problems, according to this device, a nozzle profile data 211 adjusting means described next is provided to the computer portion 201.

25 [0058]



CLAIM	FEATURE	
2	head	[0016] head 207
	converting unit	[0021][0025] Fig.9 nozzle data converting portion 204
	feed unit	[0015][0028] Fig.2 sheet feed unit 208
	ejection element	[0028] Fig.3 piezoelectric element 304
	memory storing nozzle profile data	[0021][0022] Fig.6 nozzle profile data 211
	updating unit	[0042] profile data update means 101
3	designating unit	Fig.16
	measuring unit	[0053][0072] measuring unit 102, measuring unit 1602
8	deflection electric field generating unit and charging electric field generating unit	[0063] Fig.15 deflection electrodes 1403-1 and 1403-2
12	leveling unit	[0058][0058] nozzle profile data 211 adjusting means
13	resolution changing unit	[0076]-[0078] Fig.21 elements 2102-2110

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